

CLAIMS We claim:

1. A refrigerator comprising:

~~incorporating (4, 5, 6) in its door (1)~~ a door having a water dispenser within a compartment(2) present on the outside of the door;

~~door, characterised in that~~ wherein the dispenser is connected to a water container(7) of given capacity carried by the door and provided to enable the contained water to be carbonated via a connection to a cylinder (11) ~~which contains the~~ containing a carbonating gas and ~~is also located in the door (1).~~

2. ~~The refrigerator as claimed in~~ claim 1, wherein the cylinder(11) is disposed in a chamber(10) of the door(1), the chamber being accessible from the inside or from the outside of the door via a shutter.

3. ~~The refrigerator as claimed in~~ claim 1 ~~or claims 1 and 2~~, wherein the cylinder(11) and the container(7) are connected together via a solenoid valve(26).

4. ~~The refrigerator as claimed in~~ claim 3, wherein the container(7) is provided with a water level sensor(34) which, when a given water level has been reached within the container, activates a ~~means~~ signal which indicates to the user that the water can now be carbonated by his operating the solenoid valve.

~~valve (26).~~

5. ~~The refrigerator as claimed in one or more of the preceding claims,~~ of claim 1, wherein the container(7) can be connected to the domestic water supply or to a possibly cooled source of water via a ~~valve means (32A).~~ controlled valve.

6. ~~The refrigerator as claimed in one or more of the preceding claims,~~ of claim 1, wherein the container(7) is provided with ~~safety means (35) against~~ a safety valve to prevent excess pressure.

7. ~~A~~The refrigerator as ~~claimed in one or more of the preceding claims, wherein in~~of claim 3, wherein the connection between the cylinder(11) and container (7),**further comprises, upstream of the solenoid valve-(26), a needle valve(24) is present cooperating with the cylinder-(11).**

8. ~~A~~The refrigerator as ~~claimed in one or more of the preceding claims,of~~ claim 6, wherein the safety valve(35) operates on an electrical switch to interrupt, at a predetermined carbonation pressure, the connection between the cylinder (11) ~~and the container (7):and the container.~~

9. ~~A~~The refrigerator as ~~claimed in~~of claim 8, wherein ~~said~~the switch activates an indicator advising the user that the water is carbonated and ready to be drawn off.

10. ~~A~~The refrigerator as ~~claimed in one or more of the preceding claims, wherein means~~ connected to**of claim 1, wherein an indicator lamp are**is provided to ~~indicate~~**signify** when the cylinder(11) is empty.